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Iwasaki

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[54] **ELECTRONIC DEVICE AND SEMICONDUCTOR PACKAGE**

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[52] **U.S. Cl.** **257/778**; 257/780

[58] **Field of Search** 257/778, 780, 257/781, 777, 779, 686, 782, 697

[56] **References Cited**

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[57] **ABSTRACT**

The electronic device has a structure that a semiconductor package (**10**) is mounted on a motherboard (**21**), and a buffer layer (**41**) for relieving a stress, which is produced due to a difference of physical properties between the semiconductor package (**10**) and the motherboard (**21**), is mounted on the electrical and mechanical interface between the semiconductor package (**10**) and the motherboard (**21**). For example, the buffer layer (**41**) having a thermal expansion coefficient close to that of the motherboard (**21**) is formed on a face of the semiconductor package **10** having an external connecting terminals (**12***b*) mounted. A stress caused due to a difference between a thermal expansion coefficient of a wiring substrate (**12**) of the semiconductor package and that of the motherboard (**21**) can be relieved by the buffer layer (**41**). Therefore, a cyclic stress applied to the connection between the semiconductor package and the motherboard in the actual application environment can be relieved, and reliability of connection can be improved. Thus, a semiconductor package mountable with a high degree of reliability and an electronic device having a high degree of reliability is provided.

20 Claims, 6 Drawing Sheets

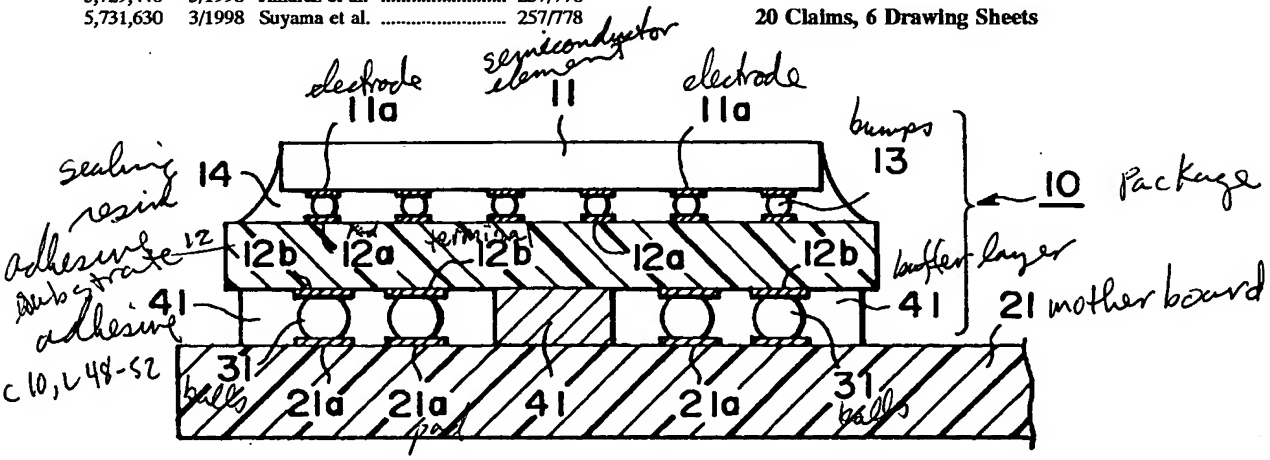

Fig 9